

**DECISION RECORD  
AND  
FINDING OF NO SIGNIFICANT IMPACT  
FOR  
UPPER BASALT CANYON  
GEOTHERMAL EXPLORATION PROJECTS**

**Decision:**

It is my decision to approve the plan of operation as described in the Environmental Assessment for the Upper Basalt Canyon geothermal exploration project. This approval is subject to the mitigations identified below. The associated Geothermal drilling permits and Sundry notices will be approved when consistent with this plan of operations, provided that drill permit and sundry notice and engineering stipulations are required in those approvals.

**Description of the project:**

Mammoth Pacific, L.P., (MPLP) is proposing to conduct two geothermal resource exploration drilling projects on portions of two existing federal geothermal resource leases, CA-11667 and CA-14408, within the Mono-Long Valley Known Geothermal Resource Area ("KGRA"), in Mono County, California. The area to be explored, termed the Upper Basalt Canyon geothermal exploration area, consists of those lands located within Section 25 and portions of Section 26, Township 3 South, Range 27 East (T3S, R27E), and portions of Section 30, T3S, R28E, Mount Diablo Baseline and Meridian (MDB&M), which are west of U.S. Highway 395 and north of California Highway 203. The project has identified ten potential drill sites for the completion of two related drilling programs. The first phase of the project is to drill, sample, and monitor up to five small diameter holes for the Upper Basalt Slim-hole Exploration Program. The second phase is to drill, complete, test and monitor up to four large diameter geothermal exploration wells for the Upper Basalt Geothermal Well Exploration Program. This project is located entirely on public lands within the Inyo National Forest.

The purpose of the project is to explore for, locate and verify the existence and characteristics of a commercially viable geothermal resource within these portions of the identified federal geothermal leases. The specific objectives of the Slim-hole Exploration Project are to drill targets identified through geologic and geophysical surveys to confirm the geologic information, measure temperature profiles, obtain samples of the geothermal fluid for water chemistry, and monitor reservoir pressures. The specific objectives of the Geothermal Well Exploration Project are to drill into and flow test the identified geothermal reservoir to confirm the characteristics of the geothermal reservoir and determine if the geothermal resource is commercially viable. Should a commercially viable geothermal resource be verified by the Projects, MPLP would be required to submit new applications and receive additional approvals before proceeding with any commercial development or production of those resources?

**Rationale for Decision:**

I have reviewed the plan of operations for the Upper Basalt Canyon slim hole and well exploration projects. The Environmental Assessment (EA) was prepared based on issues the USFS and BLM discussed with MPLP; the timeframes for the Environmental document were also decided at this meeting. A field trip was scheduled after the public scoping notification was

published in the local papers and over local radio and television stations. Comments from the public were then incorporated within the EA.

I have reviewed the public and agency comment letters received by this office during the NEPA process. The EA and mitigation measures were modified based on the comments received. This Decision Record and Finding of No Significant Impact include the mitigation measures, public comments and USFS and BLM's responses to those comments.

The rationale for approval of this project includes:

- A. This decision is consistent with the purpose for which lands were leased by the United States of America to MPLP, and which conveyed to MPLP, the "exclusive right and privilege to drill for, extract, produce, remove, utilize, sell, and dispose of geothermal steam and associated geothermal resources." To maintain this right, MPLP must "diligently explore the leased lands for geothermal resources until there is production in commercial quantities" applicable to each of these leases.
- B. The decision is consistent with surface use stipulations that were made part of the Leases CA-11667 and CA-14408.
- C. The exploration of the geothermal resource is consistent with initiatives of the National Energy Policy and supports the National Renewable Energy Initiative by providing more information about the energy production from geothermal resources.
- D. No impacts were identified in the subject EA which cannot be adequately mitigated and that would justify denial of the applicant's rights granted under the existing lease.

The potential impacts of this project are to water quality, recreation use, noise, and the northern goshawk.

Based on my review of the down hole drilling program I am comfortable that the requirements by BLM and California Regional Water Quality Control Board, Lahontan region (CRWQCB) will provide adequate drilling stipulations on well casing design that will seal off any shallow cold ground water encountered and maintain ground water quality. Additionally, BLM will monitor the drilling procedures and adherence to the mitigation measures prepared in the BLM approved Geothermal Drilling Permit (GDP) and Sundry notices (GSN).

The Forest Service and members of the public expressed concern about impacts to the recreational opportunities in the Basalt Canyon area during the scoping period. Mitigation measures and changes to the location of drill pads were made to address concerns of drilling noise, winter plowing and excess lighting. The locations of the drill sites were coordinated with the Forest Service and Mammoth Mountain to meet the needs of the snowmobile use, cross country skiing and mountain bike riding paths.

I have reviewed the potential noise impacts and have determined that the noise levels from drilling activities should not exceed local noise ordinances. A noise monitoring and complaint response program, as well as other mitigations, will be implemented as an additional contingency measure.

Three known, potentially active, northern goshawk nests were identified during the scoping period. To eliminate the potential impacts to the northern goshawk, drill holes were relocated, and mitigations were established to protect the northern goshawk during critical nesting periods. I have reviewed the mitigations and determined that there should be no residual effects to these northern goshawk sites.

### **Mitigation Measures:**

These mitigations were compiled from mitigation measures in the Environmental Assessment, Basalt Canyon Slim Hole and Geothermal Exploration Projects, public agency's, and public comment letters.

### **Upper Basalt Geothermal Exploration Project Mitigation Measures**

#### **Cultural Resource Protection Measures:**

**CUL-1:** Each area proposed for any new surface disturbance, including an appropriate buffer, would be surveyed by a professional archeologist acceptable to the BLM/USFS, and the results of this survey reported to the BLM/USFS with the request to commence surface disturbance. Drill pads and access roads would be constructed in such a way so as to ensure that recorded archaeological site materials are either not disturbed or, if they need be disturbed, that they are inventoried, documented and reported to the BLM/USFS, and a determination of their eligibility for the National Register of Historic Places and appropriate mitigation, if any, be completed by the BLM/USFS prior to disturbance to the site. To ensure that identified cultural resource sites adjacent to areas of disturbance are not disturbed, the limits of surface disturbing activities, including an adequate buffer zone, would be clearly marked and flagged prior to the start of all grading or other surface-disturbing activities. The flagging would be set with the assistance of a professional archaeologist, and the construction/grading contractor and each of the workers would be trained to understand the flagging and its importance.

**CUL-2:** If previously unrecorded cultural resources are encountered during grading or other surface-disturbing activities, all grading or other surface-disturbing activities at the location of the discovery would cease, and the authorized officer notified. Grading or other surface-disturbing activities would not recommence at the location of the discovery until the identified cultural resources(s) have been assessed, any necessary mitigation actions taken, and the expressed approval of the authorized officer or his designee granted.

#### **Visual Resources Mitigation Measures**

**VIS-1:** All drill rig and well test facility lights would be limited to those required to safely conduct the operations, and would be shielded and/or directed in a manner which focuses direct light to the immediate work area, except as may be required to comply with Federal Aviation Administration requirements. Special care would be taken to minimize or avoid the placement or use of lights that would be directly visible from U.S. Highway 395, State Route 203, the Town of Mammoth Lakes, or other areas where substantial numbers of viewers may be present. Work lights would only be on at times of darkness or when required for safety.

**VIS-2:** To the extent vegetation screening opportunities are available, temporary pipelines laid to connect the well sites would be set back from roadways to conceal the pipelines from view on existing roads.

**VIS-3:** Wellhead monitoring equipment left on the drill sites would be painted a color that would blend with the landscape and, where practical, be screened by vegetation. Locations and color choices are subject to approval by the authorized officer in cooperation with the forest landscape architect.

**VIS-4:** Should tree removal be necessary for the construction of new access roads or drill sites, then to the extent practical the tree removal would be on the north and east sides of the areas of construction to optimize screening by existing vegetation to views from the foreground vantage points to the south and west of the Project area.

#### **Vegetation Mitigation Measures**

**VEG-1:** Upon completion of operations, all Project-affected areas of surface disturbance would be re-contoured as necessary to blend with the surrounding topography. Partial, phased or concurrent reclamation may be required by the authorized officer as appropriate to minimize erosion and stabilize the disturbed areas. Salvaged and stockpiled topsoil would be redistributed over the re-contoured disturbed area. Seeding of disturbed areas would be completed using the following seed mixture and application rate.

<b>Species</b>	<b>Pure Live Seed (Pounds per Acre)</b>
Big sagebrush ( <i>Artemisia tridentata</i> )	0.5
Antelope bitterbrush ( <i>Purshia tridentata</i> )	4
Desert peach ( <i>Prunus andersonii</i> )	2
Indian ricegrass ( <i>Achnatherum hymenoides</i> )	2
Western needlegrass ( <i>Achnatherum occidentale</i> )	2
Squirreltail ( <i>Elymus elymoides</i> )	3
Spurred lupine ( <i>Lupinus argenteus</i> var. <i>heteranthus</i> )	2
Chicalote, prickly poppy ( <i>Argemone munita</i> )	1
<b>Total:</b>	<b>16.5</b>

Preferably, seeds for this project would be collected within the immediate vicinity of the project area. If this is not possible due to poor seed availability, seed from the following ecological subsections or sections the area borders on would be acceptable: Eastern Slopes Subsection of the Sierra Nevada Section; and Mono Section (Miles and Goudey 1997 – map available). If availability still presents a problem, the seed mix may be modified in consultation with the Forest Service.

Success standards for revegetation are as follows:

- At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site.
- Perennial grasses would account for at least 10% of the relative cover.
- All non-native weed species that are already present in the area would account for no more than 5% total of the relative cover at the end of the 3 year evaluation

period. New non-native species introduced as a result of the project would be eradicated, i.e. 0% cover.

The revegetated areas will be monitored for compliance with the success standards defined above, and a report provided to the Forest Service the first three years following completion of the project. Failure to meet the success standards would require additional planting and/or weed control, as appropriate, until standards are met.

**VEG-2:** Slash material produced from clearing the site access roads and drill pads would be chipped and stockpiled and spread to a depth of 1 to 2 inches over the drill sites after seeding, to serve as native mulch and to provide an additional seed source for revegetation.

#### **Noxious Weed Prevention Measures**

**NOX-1:** Prior to entering the project area, all trucks and construction equipment that will operate off of previously existing roads shall be washed to remove soil and plant parts. A central washing facility will be provided for this purpose, either at the MPLP equipment area at Casa Diablo on private land, or at a location approved by the authorized officer. Vehicle inspections will be conducted by an authorized representative to verify the absence of noxious plant propagules. Prevention is a high priority.

**NOX-2:** Where appropriate, seed mixtures used to re-vegetate disturbed areas would be certified as being free of noxious weed materials. In some cases, e.g. when seed is collected locally vs. grown in a nursery setting, weed certification may not be available.

**NOX-3:** All other materials used in erosion control or rehabilitation efforts, e.g. straw bales, would be certified as being free of noxious weed materials.

**NOX-4:** Forest litter located on drill sites 12-25,14-25,15-25, 25-25, 34-25, 38-25, 57-25, and 58-25, and on the new roadways to drill sites 56-25, 58-25, and 77-25 would be salvaged during construction, as feasible, and stockpiled for use during subsequent reclamation of the disturbed areas to minimize the potential invasion of noxious weeds.

**NOX-5:** All non-native weed species already present in the area would account for no more than 5% total of the relative cover at the end of the 3-year evaluation period, following completion of revegetation measures. New non-native species introduced as a result of the Project will be eradicated (i.e. 0% cover). Where this standard is not met, appropriate weed control measures will be implemented in order to comply with the standard for a period of three years following project completion.

**NOX-6:** Cheat grass is largely absent from the forested portions of the Project area. In order to maintain this condition, cheat grass will be removed from all areas where ground disturbance occurs. Appropriate weed control measures will be implemented as necessary, in order to prevent the invasion and spread of cheat grass, throughout the life of the project, and for a period of three years following Project completion.

**NOX-7:** Disturbed areas will be rehabilitated according to USFS specifications.

### **Wildlife Protection Measures**

**WLD-1** To reduce the potential for vehicle collisions with wildlife, especially deer, Project-related vehicles (whether driven by employees, contractors, or suppliers) traveling on unpaved roads in the Project area would be limited to a speed of 15 mph, except for Sawmill Cutoff Road, for which the speed limit would be 25 mph.

**WLD-2** No well or slim hole drilling activities would be conducted at either drill site 12-25 or 15-25 between March 1 and June 15 of any year (for the purpose of this environmental protection measure, “well or slim hole drilling” includes site construction, access road improvement, or well or slim hole re-drilling, but not well testing, temporary pipeline construction, well or slim hole monitoring, or other similar activities).

If on or after June 15 of any year a survey conducted by a qualified biologist using an approved protocol determines that goshawks have not selected and established a nest in any of the three nest trees located near drill sites 12-25 or 15-25, drilling activities may be conducted at either drill site, but only following the concurrence of the BLM authorized officer.

If on or after June 15 of any year a survey conducted by a qualified biologist using an approved protocol determines that goshawks have selected and established a nest site at one of the three nest trees located near drill sites 12-25 or 15-25:

- Drilling activities would not be conducted at the drill site located closest to the selected nest tree until July 15 of that same year; and
- Drilling activities may be immediately conducted at the drill site located farthest from the selected nest tree, but only following the concurrence of the BLM authorized officer.

**WLD-3** All Project employees, contractors, and service personnel would be advised to neither harm nor harass wildlife encountered in the Project area. To avoid potential wildlife conflicts with domestic animals, unleashed domestic dogs and other domestic pets would not be allowed on the drill sites.

**WLD-4** Any night lighting utilized at the drill sites would be shielded and directed onto the work areas of the individual drill pads to minimize lighting adjacent habitat.

### **Soils, Geology and Minerals Mitigation Measures**

**SGM-1:** Topsoil would be salvaged during the construction of all pads and access roads, as feasible, and stockpiled for use during subsequent reclamation of the disturbed areas. The depth of soil to be salvaged would be determined by the authorized officer. Soil stockpiles would be placed in locations approved by the authorized officer and would not be more than two feet high to encourage the continued viability of living organisms in the soil.

**SGM-2:** During reclamation, and prior to the replacement of topsoil, disturbed areas would be de-compacted by sub-soiling through a means approved by the USFS.

**SGM-3:** Excavated reserve pits would be reclaimed by backfilling to conform to final grade with at least one foot of clean soil salvaged from the site or other native materials and covered with salvaged topsoil.

## **Hydrology Mitigation Measures**

**HYD-1** The permittee would use the following Best Management Practices (BMPs) (USDA Forest Service, 2000) to ensure the full containment of all sediment that may be generated by storm water runoff from the construction of each pad and access road throughout the life of the Project. (See Appendix A for a description of each BMP)

1. Erosion Control Plan (BMP 2-2)
2. Timing of Construction (BMP 2-3)
3. Stabilization of Road Slope Surface and Spoil Disposal Areas (BMP 2-4)
4. Servicing and Refueling of Equipment (BMP 2-12)
5. Diversion of Flows Around Construction Sites (BMP 2-15)
6. Snow Removal Control (BMP 2-25)
7. Obliteration or Decommissioning of Roads (BMP 2-26)

This mitigation measure would be implemented by developing a plan to prevent storm water pollution, which plan would be prepared prior to construction of each well pad and access road. This plan would identify structures such as sediment traps, filter fences, straw bales, or activities that would implement the intent of the BMPs. The permittee would be responsible for ensuring that the identified BMPs are implemented immediately as required or applicable throughout the course of the exploration activities.

**HYD-2:** The slim-holes and the geothermal well bores would be cased as appropriate and utilize the appropriate BOPE as authorized by the BLM in the drilling permits to prevent inter-zonal migration of geothermal or drilling fluids and to reduce the possibility of uncontrolled flows.

**HYD-3:** To minimize the potential of any contamination of shallow ground water from drilling fluids or drilling mud, all drilling fluids and drilling mud not contained in the mud mixing tanks, mud system, or down hole would be contained in the reserve pit. Upon completion of drilling activities, the solids remaining in the mud pit would be dried, tested in accordance with the requirements of the CSWRCB Water Quality Order No. 2003 – 0003 – Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality or the project-specific requirements of the CRWQCB and, if authorized by the California Regional Water Quality Control Board, USFS and BLM, buried in the reserve pit.

**HYD-4:** No fuels or other hazardous materials would be stored, or vehicle fueling conducted, within any designated RCA (SNFPA ROD Standard and Guideline 99).

**HYD-5:** All road construction, improvement or maintenance activities conducted within designated RCAs would not divert, disrupt or impede the natural surface flow paths for, or create barriers to the flow of, flood flows (SNFPA ROD Standard and Guideline 100).

**HYD-6:** All road construction, improvement or maintenance activities proposed within designated RCAs would be conducted so as to minimize the potential for the generation of sediment during flood flows. To prevent the generation of sediment during flood flows, all spoils or other excess earth materials resulting from road or drill pad construction, improvement or maintenance would not be placed within any designated RCA (SNFPA ROD Standard and Guideline 92).

### **Grazing Mitigation Measures**

- GRZ-1:** MPLP would communicate to the Forest Officer in Charge of the effected Grazing Allotments any and all scheduled drilling and testing operations during the permitted grazing season (July 5 to September 30). Coordination of these two Forest Uses increases the probability of success for both operations.
- GRZ-2:** If required by the authorized officer, the lessee would fence active pads sufficient to prevent access by grazing animals
- GRZ-3:** In the event the Term Grazing Permittee suffers a reduction in Annual Allowable Use as a result of MPLP's operations, the Forest Service would credit or refund the permittee for that loss. The Forest Officer in Charge of the effected Grazing Allotments would coordinate with the Forest Geologist and the Term Grazing Permittee to prevent and/or mitigate recurrence of the causative factors of such loss.

### **Transportation and Public Services Mitigation Measures**

- TPS-1:** Sawmill Road and Sawmill Cutoff Road would be maintained by the permittee during construction, drilling and testing operations, and any other period of high traffic associated with the Project, to ensure that the road beds are maintained in a condition of at least equal to pre-Project conditions.
- TPS-2:** Project vehicles would not block Sawmill Road or Sawmill Cutoff Road by either waiting for any substantial length of time or parking on either road. To reduce the need for Project vehicles to wait for any substantial length of time or park on Sawmill Road or Sawmill Cutoff Road, the permittee would provide an off-site, local location for the long-term waiting or parking of vehicles not immediately being used for current operations on that site.
- TPS-3:** If Project operations continue during the winter, MPLP would erect snow stakes or wands to aid in the removal of snow from, and limit incidental disturbance to, Sawmill Road, Sawmill Cutoff Road, other access roads, and drill pads. Actual removal of snow would be with a loader or blower, not a bulldozer, and conducted in a manner designed to minimize disturbance to the road bed itself. If feasible, a layer of three inches of snow would be left on the road during snow removal to protect the road bed from the snow removal operations.
- TPS-4** Prior to initiating Project operations, MPLP would consult with SCE concerning the maintenance of adequate separation between SCE's transmission line and the drill pads, the equipment to be sited on the drill pads, and the equipment to be moved under transmission line. To the extent feasible, the drill pads would be located as necessary to avoid conflicts between the SCE transmission line and the drill pad locations, the equipment to be sited on the drill pads, and the equipment to be moved under the transmission line. Should conflicts not able to be resolved between the two parties, any dispute would be brought to the BLM and USFS, which would mediate the dispute.
- TPS-5** Should winter access be necessary and facilitate the cutting across of Sawmill Cutoff Road from the "Pole Line Road," proper signage would be prominently placed alerting the winter recreation user of the cut so as to avoid conflicts.



### **Air Quality Mitigation Measures**

**AIR-1:** MPLP would comply with the GBUAPCD requirements applicable to the drilling rig diesel engines. In order to limit NO<sub>x</sub> emissions, MPLP would either limit total daily diesel engine fuel consumption or would apply Best Available Control Technology to each diesel engine, as determined by the GBUAPCD. Records of diesel fuel flow would be maintained at each drill site and would be made available to the GBUAPCD staff upon request.

**AIR-2:** The permittee would not discharge into the atmosphere from any geothermal well, including well drilling, well reworking and well testing, more than 2.5 kilograms per hour per well (kg/hr/well) of hydrogen sulfide (H<sub>2</sub>S). If the emission of H<sub>2</sub>S from any well exceeds 2.5 kg/hr, or the State's H<sub>2</sub>S ambient air standard for one hour is exceeded at a monitoring station located at a District approved site, further venting of that well containing H<sub>2</sub>S would be curtailed until an H<sub>2</sub>S abatement plan, approved by the GBUAPCD, is implemented to reduce H<sub>2</sub>S well emissions below 2.5 kg/hr and ambient concentrations below the State standard of 0.03 parts per million. Such plan would include a description of the abatement technology, the degree of control expected from such technology, and the test data indicating that such degree of control would be expected in a geothermal well application; and air quality analysis showing that the use of such abatement technology would not result in any violation of the State ambient air quality standard for H<sub>2</sub>S.

**AIR-3:** If, during drilling, excessively high concentrations of H<sub>2</sub>S are encountered, the applicant would notify the GBUAPCD within 24 hours and either put into operation new or additional H<sub>2</sub>S abatement capacity as approved by the GBUAPCD, or ceases operation and close in the well according to appropriate standards of operation. For the purpose of this condition, excessively high concentrations of H<sub>2</sub>S would mean emissions greater than 5 lbs/hr.

**AIR-4:** The permittee would apply water during the construction and utilization of pads and access roads as necessary to control dust. Dust would not be discharged into the air for a period or periods aggregating more than three minutes in any one-hour that is as dark or darker in shade as that designated and No. 1 on the Ringelmann Chart.

### **Noise Mitigation Measures**

**NOI-1:** MPLP would implement the following measures when drilling at any of the proposed Upper Basalt drill sites:

- Where practicable, set up the drill rig so that it would act as a barrier to best shield the closest identified sensitive receptor location (either the Shady Rest Campground, Pine Glen Campground or Shady Rest Park) from noise generated from the diesel engines and air compressors;
- Train all drill rig crews in drilling rig noise awareness and prevention;
- Publish a telephone number for use by individuals for the lodging of complaints or inquiries regarding the level of noise from drilling operations. A designated representative of the permittee would be available 24 hours a day to record any lodged complaints or inquiries, and MPLP would make reasonable efforts to investigate and respond to any such complaint or inquiry within 24 hours of the complaint or inquiry. MPLP would record each lodged complaint or inquiry, and the results of its investigation and response, on a form, a copy of which would be

delivered to the BLM and USFS staff designated to receive these forms within 24 hours of the complaint or inquiry;

- Where and when practicable, cover the drill rig V-door and drill rig floor with rubber or wood to reduce impact noise from pipes and/or casing against these metal surfaces; and
- Implement procedures for handling drill pipe and casing that minimize contact with metal surfaces, such as on the V-door and pipe catwalk.

**NOI-2:** MPLP would implement the following measures, if and as practicable, when drilling with air from at any of the proposed Upper Basalt drill sites:

- Implement procedures for minimizing noise when starting the air compressors and during air bleed-offs;
- Bleed compressed air pressure through the separator/muffler rather than the drill rig floor to reduce air pressure release noise;
- Install a check valve in the drill string to slowly bleed off air pressure and reduce high pressure release noise; and
- Install mufflers around pipe connection equipment such as air tuggers and winches.

**NOI-3:** Prior to commencing any construction activity (either drill site or access road construction or slim-hole or well drilling and testing) associated with the Project, MPLP would submit to, and secure the approval of the authorized officer for, a noise monitoring program designed to adequately respond to lodged noise complaints. The program would include the monitoring of noise immediately prior to and during all periods of construction activity from monitors on or near the active drill site, at Shady Rest Park, and at the campground closest to the active drill site to allow the correlation of any complaints of noise from the public with the level of measured noise and the type of operations which occurred at the active drill site. The data obtained would be retained by MPLP for at least three years and a summary report provided to the authorized officer at the conclusion of each monitoring period.

**NOI-4:** If, after investigation of a lodged noise complaint, construction operations are determined to have exceeded the noise impact standards applicable at Shady Rest Campground, Pine Glen Campground or Shady Rest Park, MPLP, in consultation with the BLM and USFS, would further reduce drilling noise by installing a noise barrier (from weed-free straw bales or other effective material) to shield these receptors from the principal drilling rig noise sources (diesel engines and air compressors) at the drill site being drilled.

### **Recreation Mitigation Measures**

**REC-1:** The winter access contingency plan would ensure that there is at least one location along Sawmill Road which would be maintained to provide a safe and easy crossing by cross-country skiers.

**REC-2:** Public access to each reserve/drilling mud pit shall be limited through the construction and maintenance of an appropriate temporary fence around each reserve pit when the associated drill site is not continuously staffed by operations personnel and until the pit is backfilled.

## **FINDING OF NO SIGNIFICANT IMPACT AND PROPOSED DECISION**

It is my decision to approve the Upper Basalt Canyon geothermal well exploration projects as modified with the mitigations above. Exploration will be conducted as described in the submitted plan of operations and will abide by all state and federal regulations.

I have reviewed the Environmental Assessment for the plan of operations for the Basalt Canyon slim hole exploration project and the Basalt Canyon geothermal well exploration project and all comments submitted in response to the proposed action. Based on this review, I have determined that this project, including the identified mitigations, will have no significant affect on the quality of the human environment and that an EIS is not required. I have determined that the proposed project is in conformance with the approved land and resource management plan.

Approved:

Concurred with:

Bill Dunkelberger  
BLM Bishop Field Manger

Kathleen S. Morse  
USFS Mammoth Lakes District Ranger

Date:

Date:

### **Comments and Responses:**

A total of three public and agency comment letters were received. Each letter was numbered and evaluated for comment content. Each of the comments were given a sequential number. In the following responses Mammoth Pacific Limited Partnership is MPLP.

#### **California Highway Patrol**

- 1.1 **Comment:** The telephone phone number listed in Section V of Appendix C of the EA/IS for the California Highway Patrol is incorrect. The correct phone number is (760) 872-5900.

**Response:** The telephone number has been corrected.

#### **Town of Mammoth Lakes Community Development**

- 2.1 **Comment:** The Parks and Recreation Element of the General Plan indicate a desire to potentially expand the Shady Rest Park in the future, and develop and maintain an effective trail network around the park and community. The Mitigated Negative Declaration (MND)/EA for the exploration pits, and their locations, should take into consideration this policy in addition to studying the impacts to dispersed recreation outlined in the NOP.

**Response:** The management area direction set in the Inyo National Forest Land and Resource Management Plan for Management Area #9 (Mammoth) is to “prohibit development of Shady Rest Park beyond existing perimeter roads, and north of the power line rights-of-way.” The proposed Upper Basalt Geothermal Exploration Project (Project) does not encroach on this defined area. The potential impacts of the Project on both Shady Rest Park and dispersed recreation in the area were analyzed in Section 6.14 of the Environmental Assessment (EA)/Initial Study (IS) which was distributed with the Notice of Intent to Adopt a Negative Declaration, and no change in the EA/IS is required.

- 2.2 **Comment:** The EA states that ten pits will be drilled within .6 mile of the Shady Rest Park, a heavily used recreation facility. This facility is also adjacent to numerous developed and undeveloped campground areas. The MND/FONSI that will be prepared should identify mitigation measures proposed to address public health and safety measures that will be necessary to protect the public using this area. This would include signage and barriers at pit locations.

**Response:** Section 3 (Environmental Protection Measures) of the EA/IS distributed with the Notice of Intent to Adopt a Negative Declaration provides a discussion of health and safety measures incorporated into the Proposed Action and includes a summary of those emergency contingency measures set forth in detail in Appendix C to the EA/IS for protecting both onsite personnel and the public.

The Project would drill up to five slim holes from drill sites with relatively small (10'×20'×10' deep) reserve/drilling mud pits and drill up to four exploration wells from larger drill sites with larger (100'×40'×12' deep) reserve/drilling mud pits. None of the proposed drill sites are located immediately adjacent to either Shady Rest Park or the campgrounds, but all are within areas actively used for dispersed recreation activities. During site construction and drilling and testing operations, the drill sites will be staffed

by operations personnel and the public will not be allowed on these active drill sites. After drilling is complete the wellhead facilities will be locked and enclosed within a 12'x12'x6" high fence and the reserve/drilling mud pits reclaimed (re-grading or backfilled to approximate pre-Project contours and re-vegetated with native seed mixtures). The EA/IS has been revised to clearly require that public access to each reserve/mud pit be limited when the associated drill site is not staffed by operations personnel through the construction and maintenance of an appropriate temporary fence around each reserve/mud pit until the pit is reclaimed.

- 2.3 Comment: Recreational uses in the area of the project are significant to the overall guest experience of Mammoth Lakes and general Eastern Sierra visitors. Proposed noise mitigation provides additional sound attenuation through hay-bales, etc. if a complaint is received. This complaint would then be subject to determination of mitigation appropriateness by the operator. The Town of Mammoth Lakes recommends that such sound attenuation devices should be installed in conjunction with the drilling and subsequent operation [of] all ten proposed pits.

Response: As discussed in Section 6.13 of EA/IS, the Proposed Action is not expected to result in noise levels that will exceed any ordinances or regulatory restrictions on noise, and specific mitigation measures are required to further reduce noise from each of the drill sites. As an additional contingency measure, the Project has been required to implement a noise monitoring and complaint response program. Sound barriers (from weed-free straw bales or other effective material) would be constructed to further reduce noise levels if the monitoring program indicates that applicable noise levels are being exceeded. Given the multiple levels of assurances that applicable noise levels would not be exceeded, no additional mitigation appears to be warranted, and no change to EA is required.

**Sierra Club, Range of Light Group, Toiyabe Chapter:**

- 3.1 Comment: After the considerable discussions regarding the extensive use of the exploration area by cross-country skiers during the tours you and Mammoth Pacific Geothermal conducted of the area, we had expected this use to be recognized and mitigations proposed in the EA.

We feel we have a justifiable concern as we run five to ten tours through this area each winter depending on conditions and our routes are usually different than those of snowmobiles. We usually try to avoid the snowmobiles. As individuals, we and many other Mammoth Lakes' residents and visitors also ski here, sometimes often, depending on conditions. A favorite route is to start at the INF Visitors Center and tour the area of visible surface activity in Basalt Canyon. Plowed roads make it difficult to ski through an area, particularly crossing the roads if the sides are steep or if the roads are muddy or icy. This is compounded if you run into the situation unexpectedly with a tour group that includes beginners. What we would like to see in the document on cross-country skiing is a statement something like this:

In the unlikely event that it is necessary to work on or access drill rigs in the wintertime, the plowing of roads will be minimized and will be coordinated with local cross-country ski organizations. Where needed and practical, crossings will be provided that make it easier to cross the roads by contouring the banks and leaving some snow on the road surface. Relevant organizations are the Range of Light Group of the Sierra Club and

Mammoth Nordic. Mammoth Ranger Station of INF would be responsible for the coordination, notification of organizations and posting notices of roads and crossings on their bulletin board and at trail heads.

Response: As stated in Section 6.10 and 6.14 of the EA/IS, MPLP would consult with the BLM and USFS and prepare a winter access contingency plan to specifically describe how the proposed operations could be conducted to minimize the adverse effects on snowmobile and cross-country ski use of the Sawmill Cutoff Road trail or surrounding areas. The EA/IS has been revised to require that the winter access contingency plan ensure that there is at least one location along Sawmill Road which would be advertised and maintained to provide a safe and easy crossing by cross-country skiers.

- 3.2 Comment: We are also concerned that the two year follow up on invasive species is not an adequate length of time in the case of cheat grass. Due to the tenacity of cheat grass we would recommend at least a five-year follow up. Since you have long-term commitments all over this area it might make sense for Mammoth Pacific Geothermal to just commit to an ongoing invasive species program including cheat grass in their areas of exploration and production.

Response: The Noxious Weed Risk Assessment (WRA) recently prepared for the Project by the Inyo National Forest Botanist recommended that appropriate weed control measures be implemented, as necessary, in order to prevent the invasion and spread of cheat grass throughout the life of the project and for a period of three years following project completion. The EA has been amended to reflect the recommendations of the Forest Botanist.